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ABSTRACT

Internal determinants of college faculty salary levels are discussed. It is argued that the task of maintaining faculty compensation at an adequate level is affected considerably by the nature of the faculty personnel systems, particularly the system of faculty rank and its relationship to pay. The basic dilemma lies in the way the faculty is structured and in the relationship of that structure to salary costs. Salaries at colleges and universities cannot be explained or controlled by the concept of position. Individuals typically double their salary and their cost to the institution while occupying the same position and carrying out the same primary duties. Colleges depend heavily upon turnover savings to fund salary increases for continuing faculty. However, major turnover savings cannot be induced because the majority of faculty are tenured. The relative salaries of individuals and much of the eventual total costs of the institution are determined far more by decentralized reviews and recommendations than by centralized control of costs. Fringe benefits and increases in the mandatory retirement age, account for almost half of the loss of real earnings reported for 1967-1981. It is also suggested that American higher education pays a sizeable price for its entrepreneurial and expansionist tendencies, and for its failure to present a convincing case for the economic advancement of the profession. (SW)

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FACULTY SALARIES AND THE PERSONNEL STRUCTURE OF INSTITUTIONS

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When Clark Kerr twenty years ago characterized the University as ". . .a series of individual faculty entrepreneurs held together by a common grievance over parking," he was obviously reflecting happier times (Kerr, 1964, p. 20). Today, the common grievance would be salaries and few would find humor in the thought. Like most organizations, colleges and universities are not prone to search for fundamental causes when a problem such as salaries presents itself in such a way as to suggest a direct and immediate solution such as increased funds. I am not about to undermine the basic legitimacy of the concern over salaries, nor would I argue against the direct solution of increased funding. I am prepared to argue that the problem is more complicated and more of our own making than we are typically prepared to admit.

At the outset I would lay claim to only minimal expectations; for as Sir Winston Churchill said of a longtime political opponent, "He has much to be modest about." I began to explore the nature of faculty compensation because it appeared to explain and in turn be explained by a number of other features of the academic enterprise. I was struck by the lack of an adequate explanation of how the system functions, especially the relationship between the rationales for funding established by external sources and the internal allocation of funds. A substantive literature is developing which accounts for variation in salary according to internal determinants such as discipline, rank, research productivity, and proportion of time devoted to administration; and more institutional factors such as type of institution and geographical region (for example, Tuckman and Tuckman, 1976; McLaughlin, Smart, and Montgomery, 1978). But this research does not address the issue of how faculty salaries as a whole have come to be at their current level and what accounts for their increase or the lack thereof. And it occurred to me, as to others such as Linnell (1979) that the economic status of the profession might be explained in part at least by internal features of the academic system as well as by external forces.

This led me to compare faculty compensation with the systems found in other organizations and to focus initially on the concept of "position" as a determinant of compensation. What follows is a first pass at looking at internal determinants of the general level of compensation. There are many loose ends and the problem is complicated considerably by the heavy rate of inflation in recent years. Although

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I have tried to control for inflation, I believe it is an explanatory variable in its own right. But that's another story.

My general thesis is that the task of maintaining faculty compensation at an adequate level is affected to a considerable degree by the nature of the faculty personnel systems, in parcicular the system of faculty rank and its relationship to pay. More specifically, I have calculated that perhaps as much as half of the adjusted loss in average real earnings (about 10%) over a recent 15 year period can be attributed to the "cost" of increasing the proportion of faculty at senior ranks during this period. I contend also that the situation is almost certain to become worse in the next 10 years and that unfortunately the remedies available are prcbably worse then the problem itself. The problem is one of fundamental structure, unlikely to be resolved by anything short of basic changes in the personnel system. It is a situation to be understood, and hopefully to be addressed through a more cautious approach, if and when similar conditions are forecast to arise again.

The basic dilemma lies in the way the faculty is structured and in the relationship of that structure to salary costs. Compare an institution of higher learning with virtually any other organization in the private or public sector. Formal organizations exist to achieve selected goals. Achieving goals involves the accomplishment of tasks and to accomplish those tasks, positions in the organization are established. Individual compensation is linked directly to the position held, although there may be variations in salary within positions based on factors such as seniority and merit. Organizations control personnel costs by controlling the number and type of positions and the compensation accorded to each.

In contrast, consider a traditional academic institution. (I use the word "traditional" to indicate there is substantial variation from the norm, and to indicate that most institutions are experiencing considerable difficuly in ahering to the norm and are sometimes forced to compromise.) The term position in a college or university typically refers only to the position of faculty member, although in more complex institutions, there may be considerable variation in compensation among the several units and fields of expertise. But the fundamental fact is that most faculty remain in the same "position" throughout their career at the institution. Although professional activities may change slightly, it is difficult to distinguish faculty in any rational way based upon formally assigned responsibilities or other attributes of differentiated positions. Each individual's salary, however, more than doubles during their professional career, typically while occupying the same position. And the major determinant of salary is not an assessment of the individual's contribution or worth to the economic status of the organization, but reviews by immediate peers regarding an individual's progress along a career path. Contributions to the organization by faculty individually, or in the aggregate, seldom result in increased revenue that can be allocated to sa-

laries. There are exceptions among marginal institutions, but the most typical source of additional revenue, additional enrollments, usually results in a request for additional faculty, not in salary increases. From these brief, and admittedly simplified observations, certain summary points can be established and inferences drawn.

1. Unlike almost any other organization with paid employees, salaries at colleges and universities can neither be explained nor controlled by the concept of position.

2. Individuals typically double their salary and their cost to the institution while occupying the same position and carrying out the same primary duties.

3. As a result of the substantial variation of salaries within the same position, colleges and universities depend heavily upon turnover savings to fund salary increases for continuing faculty.[1]

4. Major turnover savings cannot be induced because the majority of faculty are tenured, and short of financial exigency are not subject to the RIF (Reduction in Force) other organizations utilize to adjust to changed conditions.

5. The relative salaries of individuals and much of the eventual total costs of the institution are determined far more by decentralized reviews and recommendations than by centralized control of costs. The role of centralized control is to assure some degree of equity and within among the several academic units of the institution and to allocate funds to those units.

6. Determination of faculty salaries in the short run at least, is a zero sum game. The quality of effort by faculty individually or collectively, except to increase enrollments, does not result in increased revenue.

7. My further inference, and one that can be supported only indirectly, is that the faculty personnel system in American institutions is heavily and implicitly dependent upon growth to sustain itself (both in structure and in financial compensation). Until the recent leveling, the number of faculty nationally has increased since 1889 at a remarkably consistent percentage rate ranging from 54 percent (1949-59) to 78 percent (1929-30). The exception, until the remarkably rapid growth of 117 percent in the number of faculty from 1959-69 was the low growth rate of 33 percent from 1909-19 which parallels the rate from 1969-79 (Grant and Eiden, 1981, p. 104). It is instructive to note that the decade 1909-19 saw one of the most severe declines in faculty real earnings (36%) from 1908-20 (Ruml and Tickton, 1953 p. 54). That decade also saw a remarkable doubling in the cost of living, which like the current times could not be absorbed in part through heavy increases in enrollments.

What appears to have happened rather continuously in this Century, with the exceptions noted, is that advances in faculty rank and pay have been made financially feasible by consistently adding a still larger group of faculty at the beginning ranks, thereby offsetting the increased costs of senior faculty, and indeed permitting average salaries to increase at a rate greater than would be generated under conditions of stability.

Obviously the pattern of growth in the number of faculty has ceased and for the system as a whole is projected to decline slightly before beginning to grow again in the late 1990's (Fernandez, 1978). Efforts to cope with this situation have focused on the effects of tenure and the anticipated loss of "vitality" as faculties become tenured in. But the focus conveniently avoids the more fundamental and more crass conclusion that most institutions simply cannot afford to tenure the same percentage of new faculty as they have in the past. And this is neccesitated in part because institutions must now absorb the last "bubble" brought in to meet the enrollment increases of the 60's and 70's and now progressing to senior ranks without an offsetting increase at the beginning levels.

But the cost of that bubble moving through the system is absorbed even more by those being denied tenure and consequently "churned" by the system, and by the remaining participants. And it is the financial consequences for this latter group that have been overlooked and which gives us some insight regarding the structural characteristics of the faculty compensation system.

The most salient feature of current faculty salaries is the decline in real earnings by almost one-fifth (18.9%) for the period 1967-81 according to AAUP national data (American Association of University Professors, 1968, 1982). In 1981, this loss would have required an increase of 23 percent ($5959) to bring the 1981 average salary of $25,570 up to the 1967 level of real earnings.[2] But the loss is more complex and more structural than discussions to date would indicate. About three-fourths (72%) of the funds needed to overcome that loss have actually been available, but have been allocated to other purposes which reasonably must be considered as part of real earnings.

To begin with, the percentage of faculty compensation allocated to fringe benefits more than doubled as a percentage of salary from 9.1 percent to 19.3 percent in 1981 (American Association of University Porfessors, 1968, 1982). Some of this amount, such as increased Social Security payments, can be considered as "imposed," but the benefits are real. Subtracting the amount necessary to maintain 1967 real earnings at a fringe of 9.1 percent still leaves $2101 in increased benefits, or 35 percent of the amount needed to make up the 23 percent loss in real earnings.

A second change that affects average salaries but still increases real earnings is the increase in the minimum mandatory retirement age

from 65 to 70. This became effective for faculty in 1979. National data are not available, but the NSF-ACE data on turnover indicate retirement to be about 3 percent a year, and probably increasing I would estimate (National Science Foundation, 1981). Assuming that 2.5 percent of the faculty extend their service from age 67 to age 70, that these faculty earn on the average 20 percent more than the average full professor, and that replacements are hired at 10 percent less than the average assistant professor, I calculate the cost to an institution in "average" real earings at .02 of the salary budget or 9 percent of the amount needed to maintain real earnings 1967-81.

These two factors, fringe benefits and increases in the mandatory retirement age, thus account for almost half (44%) of the loss of real earnings reported for 1967-81.

This brings us to the major feature of interest, the composition of the faculty itself. To calculate the effect of changes in the distribution of faculty by rank, I have constructed a simple faculty salary model of a hypothetical institution using the 1981-82 AAUP salary data (Table 1). I then recalculated the salary data, distributing the faculty by the 1967-68 percentages by rank, but using the 1981-82 average salaries by rank. The difference is .066 of the 1981-82 distribution, or 28 percent of the amount needed to return average real earnings to their 1967-68 level. But the actual effect of changes in "loss" of real earnings by the two factors described earlier. Subtracting for increases in fringe benefits and changes in the mandatory retirement age leaves an adjusted loss in real earnings of roughly 10 percent which would require a salary increase of 13 percent to overcome. The portion of this adjusted loss attributable to changes in the distribution of faculty by rank is about half (51%).[3]

Table 1 about here

Unfortunately the story does not end here. The situation is likely to become increasingly worse unless drastic measures are imposed. According to data from the Carnegie Council (Fernandez, 1978) the median age of faculty in 1981 was about 46. Assuming no other major changes, the median age is projected to rise at an accelerating rate to about 52 in 1990 and to about 54 in 1995. According to AAUP data, the percentage increase in the proportion of full professors has been about three fourths of a percent a year in recent years. Given stable enrollments, and assuming the "worst" in the sense that the proportion of non-tenured faculty can he held constant, it seems not unreasonable to assume that the proportion of faculty at the full professor level might rise to around 40 percent between 1990-95, with the proportion of associate professors decreasing by the same amount. That change calcuated against the 1981 salary model would require the

TABLE 1

DIFFERENCES IN FACULTY SALARY EXPENDITURES
ATTRIBUTABLE TO CHANGES IN DISTRIBUTION BY RANK
1967/68 - 1981/82*

Rank	Ave. Sal. 1981-82	Dis. of Fac. 1981-82	Derived Sal. Expend. 1981-82	Dis. of Fac. 1967-68	Derived Sal. Expend. 1981-82 if 1967-68 Dis.
Professor	$33,480	32.5%	$1,088,100	24.6%	$823,608
Associate	25,210	29.2	736,132	23.0	579,830
Assistant	20,630	28.1	579,703	32.8	676,664
Instructor	16,310	8.5	138,635	18.0	293,580
Lecturer	18,530	1.7	31,501	1.6	29,648
		100.0%	$2,574,071	100.0%	$2,403,330

*AAUP National Data

equivalent of another 3 percent in real earnings to fund. Or to put it in the framework of this paper, that is what the faculty can expect to lose in average real earnings if the distribution by rank changes in this way.

When this potential loss of 3 percent is coupled with the 10 percent plus increase needed to restore real earnings to their 1967 level, then with the lack of opportunity to gain salary advantages out of enrollment growth as we have done in the past, and combined in turn with the probability of least modest inflation for the foreseeable future, the chances of even maintaining real earnings are slight.

It is appropriate, and in this case exceedingly important, to inject a note of caution regarding the actual data and procedures. The AAUP data are now based on NCES surveys and have changed somewhat in format over the years. I have not explored all the implications of those changes nor have I pursued other structural changes such as the disproportionate growth in faculty by type of institution and by region. Finally, I have not adjusted the income data for deductions due to increased taxes, etc. to arrive at a net spendable income.[4] I have attempted to use basic data to examine at least a portion of the structure of academic compensation. While the magnitude of the results may change, the general direction of the findings seems reasonably certain, despice potential problems with the data.

I should also mention the complications of inflation. These proportions of adjustment in real earnings seems small compared with the effects of inflation in recent times. But in a sense, inflation has hidden the problems and has made them somewhat easier to accept and to deal with. Because of budget increases associated with inflation, institutions have had a larger proportion of discretionary funds with which to make adjustments. And the magnitude of the change in salaries has led faculty to overlook the smaller fundamental changes in real earnings attributable to structural conditions. Were it not for inflation, these structural conditions would be much more salient and much more the source of major conflict. My own suspicion is that inflation may have become a basic factor in many salary budgets in the sense of providing discretionary funds. If this is the case, a period of low inflation will offer several of the same problems as a period of stable enrollments.

This has been essentially an exercise in hindsight. The basic hindsight reveals a failure to consider the long term consequences of personnel and financial policies. As noted by Kerr and cited earlier, there has been an amazingly entrepreneurial flavor about American higher education in which potential consequences have been ignored in the quest to build programs, departments, and institutions. That spirit was also noted early in the Century by the Carnegie Foundation in a report which presented as a major theme, the failure to develop college teaching as a profession through increased salaries and financial security in favor of expanding the number and comprehensiveness

of institutions and programs (Carnegie Foundation, 1908). This entrepreneurial spirit has led institutions of higher learning to overlook the fact they are essentially postponing personnel costs by rapidly adding faculty at the beginning ranks in periods of growth. Since these future costs have not been brought to the attention of, nor agreed to by those who fund the system, the costs are typically absorbed by faculty in the system.

A brief examination of the literature of earlier periods suggests that at least some of the problem stems from genuine ignorance of how much the personnel system depends on growth to sustain itself and how important the composition of the faculty is in determining the economic status of the profession. In addition, we are not prone to explore nor explain these forces, because to call attention to them is to call attention to how much of the problem is of our own making, and to invite external forces to exert greater control over the system. Higher education has maintained a great deal of automomy in internal personnel matters by simply failing to examine, let alone communicate, the probable consequences of its personnel actions. The consequences are later categorized under headings such as the loss of real earnings, rather than examined as features to be monitored and potentially controlled in the future.

And monitoring and control can be carried too far. Some institutions seem bent on transforming the academic system into another branch of the civil service, organized around the concept of position. We appear to have done this universally with tenure, and a number of institutions have converted rank itself into set positions rather than a representation of progress within an academic career. Before abandoning traditional conceptions of rank as reflecting career stages, rather than positions in a formal organization, we should examine the potential consequences of these changes.

Finally, higher education should reaffirm two points if the value system and organizational status of the faculty is to be maintained. 1) Economically, a college or university in part more like a partnership than a formal organization defined by positions. Like a large law firm, the partners must suffer the fortunes of the firm rather than expect to be reimbursed by a higher authority. We cannot expect society to suddenly compensate institutions for changes in the internal composition of the faculty without discernable increases in the benefits to society. 2) We owe it to the profession, if not to ourselves as individuals, to exercise prudent judgement in the expansion and advancement of institutions. We continue to pay a sizeable price for our entrepreneurial and expansionist tendencies and for our failure to present a convincing case for the economic advancement of the profession.

Footnotes

[1]Using the calculations described later for determining the effect of mandatory retirement (2.5 percent of the faculty retiring as full professors at 20 percent above the average for that level, replaced by assistant professors at 10 percent below the average for that level - see Table 1 - yields a turnover savings of each year by 2.1 percent for retirement alone.) Add to that, turnover for assistant professors at 2 percent of all faculty, nontenure expirations at 2 percent, and all other faculty at 3.5 percent, all calculated at the "average" for those levels and replaced at minus ten percent for assistant professors and nontenure track faculty; and at the average for assistant professors for all other faculty, yields an additional 1 percent. The much discussed "churning" of assistant professsors produces very little "savings." The total turnover rates are from the NSF-ACE data (National Science Foundation, 1981).

[2]An 18.9 percent loss would place salaries at 81.1 percent of the same level of real earnings. This would require a 23.3 percent increase in average salary to overcome.

[3]To look on the positive or negative side, depending on your perspective, this might be considered an economic benefit or cost of tenure. If it were not for tenure, there would be (and is) considerable pressure to reduce the faculty at senior ranks to achieve a less costly salary expenditure.

[4]This would be appropriate only for comparing faculty salaries with those of other occupations, as AAUP and others have done.

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